WHAT IS CLAIMED IS:

1. A method of therapeutically heating a collagenous structural support tissue of a pelvic support system to a target temperature, the method comprising:

delivering energy to the structural support tissue;

monitoring the effect of the delivery of energy on the structural support tissue to estimate a treatment time of reaching the target temperature;

comparing the estimated treatment time with desired treatment time(s);

adjusting a power level of the energy if the estimated treatment time is not coincident with the desired treatment time(s).

2. The method of claim 1 wherein monitoring the effect of the delivery of energy comprises:

measuring an elapsed time of delivery of the energy to the structural support tissue;

measuring a temperature of the tissue and a temperature rate of change of the structural support tissue; and

using the elapsed time of delivery of the energy, measured temperature of the structural support tissue, and temperature rate of change at the structural support tissue to calculate the estimated treatment time.

3. The method of claim 2 wherein measuring the temperature and the temperature rate of change at the structural support tissue is carried out only after a predetermined amount of time after commencement of a delivery of energy to the structural support tissue.

4. The method of claim 3 wherein the predetermined amount of time is between approximately 25 seconds and 45 seconds.

5. The method of claim 2 wherein measuring the elapsed time, temperature of the structural support tissue, and the temperature rate of change at the structural support tissue is repeated at predetermined intervals during the delivery of the energy.

6. The method of claim 2 wherein the measured temperature of the structural support tissue and temperature rate of change of the structural support tissue is an average temperature and average temperature rate of change over a predetermined interval.

7. The method of claim 6 wherein the predetermined interval is approximately six seconds.

8. The method of claim 7 wherein adjusting the power level is carried out after each predetermined interval.

9. The method of claim 1 wherein if the estimated treatment time is less than the desired treatment time(s) then the adjusted power level is lower than an original power level.

10. The method of claim 1 wherein if the estimated treatment time is greater than the desired treatment time(s) then the adjusted power level is higher than an original power level.

11. The method of claim 1 wherein adjusting the power level comprises adjusting the power level in step-wise adjustments of ± 1 Watts, ± 2 Watts, or ±5 Watts.

12. The method of claim 11 wherein a size of the step-wise adjustment is selected based on the difference between the estimated treatment time and the desired treatment time.

13. The method of claim 1 wherein the target temperature is between approximately 65°C and 75°C.

14. The method of claim 1 wherein the desired treatment time is between approximately 150 seconds and approximately 240 seconds.

15. The method of claim 1 wherein adjusting is automatically carried out by software in a control system memory.

16. The method of claim 1 wherein the structural support tissue is a collagenated tissue in an endopelvic fascia.

17. The method of claim 1 further comprising accessing the structural support tissue transvaginally.

18. The method of claim 1 further comprising accessing the structural support tissue laparoscopically.

19. A system for delivering energy to a collagenous structural support tissue of a pelvic support system, the system comprising:

a processor;

a memory coupled to the processor, the memory configured to store a plurality of code modules for execution by the processor, the plurality of code modules comprising:

a code module for delivering energy to the structural support tissue;

a code module for estimating a treatment time of reaching a target temperature;

a code module for comparing the estimated treatment time with desired treatment time(s); and

a code module for adjusting the delivery of the energy to an adjusted power level if the estimated treatment time is not coincident with the desired treatment time(s).

20. The system of claim 19 wherein the code module for estimating the treatment time of reaching the target temperature comprises:

a code module for measuring an elapsed time of delivering energy to the structural support tissue;

a code module for measuring a temperature and a temperature rate of change at the structural support tissue; and

a code module for using the measured elapsed time, measured temperature and temperature rate of change to calculate an estimated treatment time.

21. The system of claim 19 further comprising a power supply coupled to the processor.

22. The system of claim 21 further comprising an applicator coupleable to the power supply for delivering the energy to the structural support tissue.

23. A method of therapeutically heating a collagenous structural support tissue of a pelvic support system, the method comprising:

delivering energy to raise a temperature of the structural support tissue to a first target temperature; and

dynamically adjusting a power level of the energy after the structural support tissue has substantially reached the first target temperature so as to allow the structural support tissue to dwell at substantially a second target temperature for a desired amount of dwell time.

24. The method of claim 23 wherein adjusting the power level comprises making an adjustment of the power level upon entry into dwell which is either a constant value drop from an entry power level or a power level drop which is proportional to a rate of change of the tissue temperature at an entry point into the dwell.

25. The method of claim 23 wherein the first target temperature is substantially equal to the second target temperature.

26. The method of claim 23 wherein the first and second target temperatures are between approximately 70°C and approximately 75°C.

27. The method of claim 23 wherein the desired amount of dwell time is at least approximately 30 seconds

28. The method of claim 23 wherein the desired amount of dwell time is between approximately 20 seconds and approximately 45 seconds.

29. The method of claim 23 wherein adjusting the delivery of energy comprises reducing a power level of the delivery of energy at least once during the dwell time.

30. The method of claim 23 further comprising:

measuring a temperature of the structural support tissue at selected intervals during the dwell time; and

further adjusting delivery of energy to the structural support tissue if the measured temperature of the structural support tissue is not within an acceptable range from the second target temperature.

31. The method of claim 23 wherein further adjusting delivery of energy comprises raising or lowering the power level less than approximately 2 Watts.

32. A system for delivering energy to a structural support tissue of a pelvic support system, the system comprising:

a processor;

a memory coupled to the processor, the memory configured to store a plurality of code modules for execution by the processor, the plurality of code modules comprising:

a code module for delivering energy to raise a temperature of the structural support tissue to a first target temperature; and

a code module for dynamically adjusting a power level of the energy after the structural support tissue has substantially reached the first target temperature so as to allow the structural support tissue to dwell at substantially a second target temperature for a desired amount of dwell time.

33. The system of claim 32 further comprising a power supply coupled to the processor.

34. The system of claim 33 further comprising an applicator coupleable to the power supply for delivering the energy to the tissue.

35. A method of treating a tissue of structural support tissue of a pelvic support system, the method comprising:

delivering energy to the structural support tissue at a first power level;

estimating a treatment time of reaching a first target temperature;

comparing the estimated treatment time with desired treatment time(s) for reaching the first target temperature;

adjusting the delivery of the energy to an adjusted power level if the estimated treatment time is not coincident with the desired treatment time(s), wherein the adjusted delivery of energy is sufficient to cause the first target temperature to be reached in substantially the desired treatment time(s); and

dynamically adjusting a power level of the energy to a modified power level after the structural support tissue has substantially reached the first target temperature so as to allow the structural support tissue to dwell at substantially a second target temperature for a desired amount of dwell time.